

*AMENDMENTS TO THE CLAIMS*

1. (Currently Amended) A separator system for separating particulates from air flowing in a path comprising two or more separator stages ~~(11, 12, 13)~~ arranged in succession in the direction of flow of air in said path, each stage ~~(11, 12, 13)~~ including a respective housing ~~(22)~~ containing a plurality of side-by-side inertial separators ~~(26)~~ through which said air flows, the additional total pressure drop produced by each separator stage ~~(12, 13)~~ after the first separator stage being less than the additional total pressure drop produced by the preceding separator stage ~~(11)~~ in an upstream direction.
2. (Currently Amended) A separator system according to claim 1 wherein there are first and second separator stages ~~(11, 12)~~, the total pressure drop across the first and second stages ~~(11, 12)~~ being less than twice the pressure drop across the first stage ~~(11)~~.
3. (Currently Amended) A separator system according to claim 2 and comprising a third separator stage ~~(13)~~ downstream of the second separator stage ~~(12)~~ in the direction of flow of air in said path, the total pressure drop across the first, second and third separator stages ~~(11, 12, 13)~~ being less than 1.5 times the total pressure drop across the first and second separator stages ~~(11, 12)~~.
4. (Currently Amended) A separator according to claim 3 and comprising a fourth separator stage downstream of the third separator stage ~~(13)~~ in the direction of flow of air in said path the total pressure drop across the first, second, third and fourth ~~(11, 12, 13)~~ separator stages being less than 1.33 times the total pressure drop across the first, second and third ~~(11, 12, 13)~~ separator stages.
5. (Currently Amended) A separator system according to ~~any one of claims 1 to 4~~ claim 1 wherein each inertial separator ~~(26)~~ includes a vortex generator ~~(31)~~ formed by a helical vane ~~(32)~~, the pitch of each vane ~~(32)~~ of an upstream stage being greater than the pitch of each vane ~~(32)~~ of a downstream stage.

6. (Original) A separator system according to claim 5 wherein the vane pitch is between 45 mm and 33mm.

7. (Currently Amended) A separator system according to ~~any one of claims 1 to 10~~ ~~claim 1~~ wherein the housing ~~(22)~~ of each stage ~~(11, 12, 13)~~ receives a scavenge air flow for removing from the housing particulates separated from said air by the stage, the volume of scavenge air flow supplied to each housing decreasing in a downstream direction.

8. (Currently Amended) A separator system according to claim 7 wherein the scavenge air flow decreases by equal amounts between stages ~~(11, 12, 13)~~.

9. (Currently Amended) A separator system according to ~~any one of claims 1 to 10~~ ~~claim 1~~ wherein each stage ~~(11, 12, 13)~~ includes a different number of inertial separators ~~(26)~~, the number of inertial separators ~~(26)~~ in each stage decreasing in a downstream direction.

10. (Original) A separator system according to claim 9 wherein each stage has, in relation to the succeeding stage in a downstream direction, between 5% and 30% less inertial separators.

11. (Currently Amended) A separator system according to ~~any one of claims 1 to 10~~ ~~claim 1~~ wherein an uninterrupted flow path is provided between successive stages ~~(11, 12, 13)~~.

12. (Currently Amended) A separator system according to ~~any one of claims 1 to 11~~ ~~claim 1~~, and in which there are at least three separator stages ~~(11, 12, 13)~~, wherein the spacing between the stages is equal.

13. (Currently Amended) A separator system according to ~~any one of claims 1 to 12~~ ~~claim 1~~ and in which there are at least three separator stages ~~(11, 12, 13)~~, wherein the spacing between the separator stages is not equal.

14. (Currently Amended) A separator system according to claim 13 wherein the spacing between separator stages ~~(11, 12, 13)~~ increases in a downstream direction.

15. (Currently Amended) A separator system according to ~~any one of claims 12 to 14~~ claim 12 wherein the spacing between adjacent separator stages ~~(11, 12, 13)~~ is between 6mm and 100 mm.

16. (Currently Amended) A separator system according to ~~any one of claim 1 to 15~~ claim 1 wherein a barrier filter ~~(14)~~ is provided downstream of the last stage in the direction of flow of said air in said path.

17. (Currently Amended) A separator system according to claim 16 wherein the barrier filter ~~(14)~~ is formed by a depth filter media.

18. (Currently Amended) A separator system according to ~~any one of claim 1 to 17~~ claim 1 wherein the system removes at least 99.5% of particulates in said air and preferably at least 99.7% of said particulates.

19. (Currently Amended) An air intake for an engine including a separator system according to ~~any one of claim 1 to 18~~ claim 1.

20. (Original) An engine including an air intake according to claim 19.

21. (Original) An engine according to claim 20 and including a turbocharger between the air intake and the engine, air flowing from the turbo charger to the engine in an uninterrupted path.